

diameter. **ys**: yellow substance, yellow to yellowish brown contents, chiefly in vessel, rarely in wood fiber or wood parenchyma; insoluble in ether, chloroform, acetone, and soluble in acid-alcohol, 10% sodium carbonate solution; by filtered ultra-violet light yields yellow to yellowish green fluorescence. **fg**: fungus, chiefly in vessel, rarely in wood fiber and wood parenchyma.

(2) **Cortex powder** (fig. 4, B), **k**: cork layer in surface view (**k₂**) and in lateral view (**k₁**); polygonal, with yellowish brown walls, sometimes with cork cambium (**kc**). **bp**: bast parenchyma, colorless, oblong, thin-walled parenchyma, often containing starch grains. **p**: parenchyma of primary cortex, irregular-shaped, rather thick-walled parenchyma, containing rosette aggregates or single crystal of Ca-oxalate; rarely with starch grains. **mr**: medullary ray, polygonal or rounded Parenchyma, often crossed at right angles with bast parenchyma; containing starch grains, rosette aggregates, single or combined crystals (**mr₁**); sometimes containing oil drops, which turns red by Sudan III, practically insoluble in alcohol and chloral-hydrate solution (**mr₂**). **bf**: bast fiber, often in bundle, wall about 5μ in thickness. **ca**: rosette aggregates of Ca-oxalate, irregular-shaped, $15-25\mu$ in diameter, **cr**: single or 2 to 3-combined crystals, $10-20\mu$ in diameter. **sta**: single, rarely 2 to 3-compound starch grains, sphaeroidal, ellipsoidal or oval $2-15\mu$ in diameter; hilum and lamellae indistinct. **cf**: crystal fiber, containing rosette aggregates or single crystals of Ca-oxalate. **obs**: obliterated sieve tissue, accompanied by companion cells with characteristically pitted walls, **s**: sieve tube, with sieve plate and callus plate, very rarely containing fungus.

○花粉のあるときとないときのある植物 (久内清孝) Kiyotaka HISAUCHI:

Plants which do not produce pollen grains.

草木には葯があつてもその中に花粉のないものがよくある。其例はイヌエンジュとニガクサである。前者の場合は花がいくぶん大きく色がうすくて花粉がないが花粉のある方は少しく色に赤味をおび形が少しく小さい。どちらにも實ができるが無花粉の株には少ない。ニガクサの場合には2雄葯が超出するものには花粉があるが閉在するものは花粉を出さない。